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Esophageal Dilatation

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The counterirritant caused a moderate inflammation which lasted several days. It was intended that the animal should go home for prolonged stall rest since it might take several months before it would be known if the treatment helped the condition. Because of inclement weather the owner was unable to return to get the animal for several weeks, and two more injections were made at two-week intervals before the owner returned for it. The second injection was made using one part chloroform and one part turpentine. The third injection was made using Hypodermmin, (Haver-Lockhart.)

Oran R. Corbett '60

References:

The Anatomy of Domestic Animals, Sisson and Grossman, 4th Edition, W. B. Saunders Company, 1953. pp. 300-301, 353, 836.

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Esophageal Dilatation. A review of the basic embryology concerning the fate of the aortic arches is described herein. Briefly, the first two pair appear and disappear early and are of no consequence. The third pair remain as the common carotid arteries. The fourth pair persist as different structures. The left arch becomes the arch of the aorta, and the right arch becomes the innominate artery. The fifth pair appear briefly then degenerate. The sixth develop into the pulmonary artery on the right side and the left becomes the ductus arteriosus until birth. When breathing begins muscular contraction closes the ductus arteriosus. The resulting structure is the ligamentum arteriosum.

A two and one half month male miniature poodle was admitted to the Stange Memorial Clinic on January 22, 1960. This puppy was reported to have been ill for the last four weeks, and had a history of vomiting following eating. The other puppies in the litter were reportedly in good health. The condition was first noted after the pup was weaned and put on a solid food diet.

Examination revealed a temperature of 99.°F. Very coarse dry rales were heard when the lungs were auscultated. The pulse



Radiograph of an Esophageal Dilatation in a Miniature Poodle.

was 120 per minute. The animal's general condition was quite poor, with the hair coat being thin and rough and general body fat being absent. The puppy was quite depressed, and did not wish to move. The mucous membranes were quite pale in color. Some serous discharge was noted from the eyes and also from the nostrils, especially the left one. Palpation of the neck and throat region was negative.

On the following day the puppy was even more depressed. A test meal of warm Kings Fare* (two oz.) and water were given and the animal observed for sign of vomition. There was no vomition during the first hour post feeding. It was then decided to administer a liquid suspension of barium sulfate and immediately radiograph the puppy in lateral recumbency. Since a congenital upper digestive tract abnormality was suspected, a tentative diagnosis of esophageal dilatation due to aortic arch abnormalities was made.

The animal vomited nearly all the barium sulfate suspension shortly after the radiogram was taken. The radiogram revealed Jabot Esophageal Diverticulum of

* Hygrade Food Products

the thoracic esophagus just within the rib cage. Dilation of the esophagus anterior to the diverticulum was quite evident on the radiogram.

The animal was made comfortable and surgery was planned for the following day. The puppy was found dead the next morning, January 24. The owner granted permission to perform a necropsy and these findings are outlined below.

There was an esophageal dilatation in the anterior thorax resulting from formation of the aorta from the left branch of the embryonic arch and trapping the esophagus and trachea between the heart and the sixth aortic arch connecting the pulmonary artery and the aorta. Also, a piece of ligamentum nuchae several inches square was trapped with the anterior thoracic esophagus. A posterior thoracic esophageal dilatation was also found.

Typical histories of this type case are quite true to form. Trouble begins at five to six weeks of age when solid foods are added to the diet. This results in vomiting and dilatation for the more solid foods are passed only with difficulty through the tight fibrous and vascular band of the congenital malformation. The abnormal lung sounds in this case were probably also caused by the pressure of the ligamentum arteriosum upon the trachea. This type patient does not retch excessively upon vomition and the vomitus is not acid as it would be had it entered the stomach.

Positive diagnosis can be made with radiography following the administration of radiopaque suspensions.

Although difficult, surgical correction has been attempted. It would consist in this case of sectioning the ligamentum arteriosum and reduction of the esophageal diverticulum.

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had been unable to eat and drink properly for the preceding five days. Four days prior to admittance, the animal was examined by a veterinarian and several unsuccessful attempts to pass a stomach tube were made. Several parasymphathomimetic drugs were administered with no effect. A tentative diagnosis of esophageal obstruction was made at this time. The owner further stated that any attempts to eat or drink resulted in the food or water running out the nostrils of the animal.

Examination of the pony showed that it was severely dehydrated. The skin was very dry and had a canvas-like consistency when lifted, failing to return to normal position quickly. It was noted that the pony was quite thirsty and attempted to drink from pools of water on the clinic floor. The neck region was palpated to determine if there was a palpable occlusion of the cervical esophagus. Nothing definite was revealed, although a soft, gassy swelling just posterior to the rami of the mandibles was detected. It was decided to attempt to pass a one-half inch diameter stomach tube to locate an obstruction if one existed.



Surgery for Esophageal Foreign Body in pony.

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An Esophageal Foreign Body In A Pony. On January 15, 1960 a two year old black male pony of grade Shetland breeding was presented for treatment at Stange Memorial Clinic. The history obtained from the owner was that the animal